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## Agenda

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- Introductions
- Operational Risk: Why model?
- Modelling operational risk
  - How difficult can it be?
  - Inputs
  - Turning the handle
  - Outputs
- What can you do next?
- Questions

## Operational Risk: Why model?

***“The risk of loss arising from inadequate or failed internal processes, personnel or systems, or from external events”***

- Around a quarter of life insurers cited this as one of their top 5 risks in their Solvency Capital Requirement under Solvency II.
- Affects all aspects of the insurer’s operation.
- Can be actively managed.
- Potential for capital add on.
- Specific to YOUR company.

Modelling operation risk is not the correct choice for all companies but challenge will still lie in justifying why this is the case.

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## Modelling operational risk: how difficult can it be?

### Common grumbles from actuaries:

*“The risk team gives us the risk assessments and we just plug the numbers in.”*

*“We don’t have the skills in our team.”*

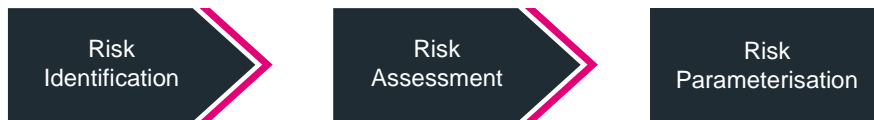
*“It’s just guess work anyway.”*

*“Actuaries don’t need to be involved with operational risk.”*

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## Modelling operational risk: Inputs



### Key Challenges:

- Explanation, explanation, explanation
- Anchoring to past events
- Finding the right people in your business
- Lack of data
- Linking inputs with outputs

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## Modelling operational risk: More than just turning the handle

**“And here’s where the actuaries come in...”**

### Key challenges:

- Bridging the understanding between inputs and outputs
- Types of models: scenarios, loss distributions or hybrid?
- Model governance and controls
- Setting correlations
- Analysis of results
- Effect of risk mitigation and controls
- Integration within internal model

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## Operational risk: A market view

<b>Banks</b>	1	2	3	4	5
<b>General insurers</b>	1	2	3	4	5
<b>Lloyds syndicates</b>	1	2	3	4	5
<b>Life insurers</b>	?				

Should they be the same?

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## Operational risk: What do you do with the outputs?

Key challenges:

- Confidence of what the capital figure means.
- Allocation of capital to different business areas.
- Understanding your risk appetite.
- Managing operational risk, demonstrating use test.

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# What can you do next – partnering with your business to better manage your operational risk

## Easy

- Read through your operational risk documentation – does your data and expert judgement align?
- Talk to your operational risk team – how can you get more involved with the process?

## Medium

- Make your model an inherent part of the process – are some risks highly sensitive? Is the model aligned with your overall capital e.g. correlations?
- Implement adequate control and governance on your operational risk model output – is this risk in line with others?

## Difficult

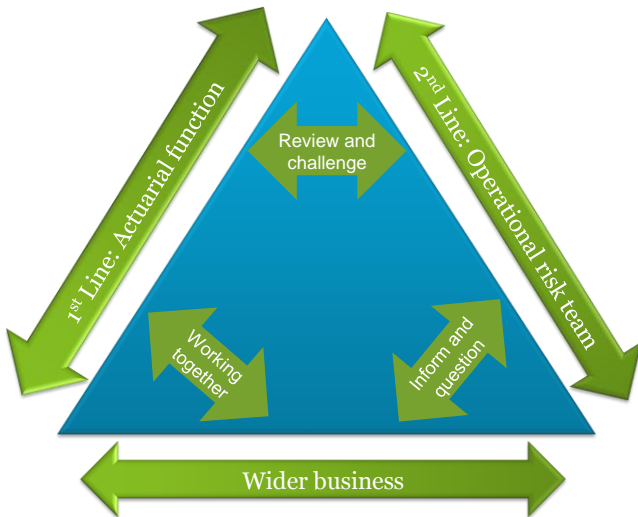
- Actively manage your operational risk capital e.g. Is operational risk taken into account when implementing large IT projects?
- Clearly articulate what your target operational risk capital is and how you will get there

Or is it?

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# Operational risk: Nirvana



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## Operational risk: Nirvana

*“And they lived happily ever after.....”*



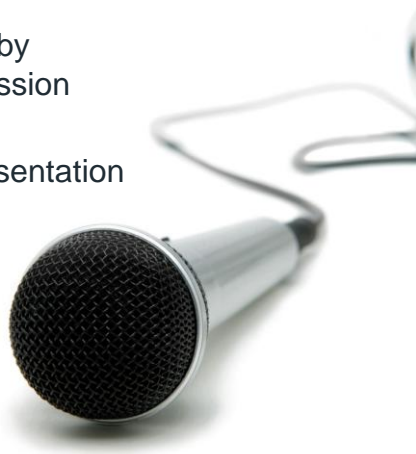
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## Questions or comments?

Expressions of individual views by members of The Actuarial Profession and its staff are encouraged.

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